

Date: Thu, 30 Jun 94 04:30:16 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #205
To: Ham-Ant

Ham-Ant Digest Thu, 30 Jun 94 Volume 94 : Issue 205

Today's Topics:

 Dual band J-pole info wanted
 Hamsticks, matching coil or caps...
 HF Mobile Antennas
 J-Poles and Baluns
 More mobile antenna questions
 Quadfiliar Helix For (2 msgs)
 Quadfiliar helix for GPS
 VHF,UHF metal boom yagi, formula?

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 29 Jun 1994 17:14:50 -0500
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!not-for-mail@network.ucsd.edu
Subject: Dual band J-pole info wanted
To: ham-ant@ucsd.edu

I would like some information sources and plans to build a dual-band
(VHF/UHF) J-pole antenna. All help is appreciated

Steve McKamey (KQ4BM) smckamey@cap.gwu.edu
106 Norway Lane
Oak Ridge, TN 37830 ar156@freenet.buffalo.edu
(615) 482-5681 (H) (615) 576-0439 (W)

Date: 29 Jun 1994 19:54:19 -0400
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!news.intercon.com!news1.digex.net!
digex.net!not-for-mail@network.ucsd.edu
Subject: Hamsticks, matching coil or caps...
To: ham-ant@ucsd.edu

I just started using a Hamstick for 40M mobile work. The best SWR was 2:1. Per the instructions, I added a 400pf capacitor and that dropped the SWR down to 1:1 (plus extended the whip another half inch to re-tune). Is the capacitor really doing justice (low loss) or am I better off using a matching coil at the base?

Andy N3LCW

Date: Wed, 29 Jun 94 21:13:32 PDT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!convex!news.onramp.net!
usenet@network.ucsd.edu
Subject: HF Mobile Antennas
To: ham-ant@ucsd.edu

> Gordon Couger

To pick another nit, an article in April CQ on modified Hustlers says the exact opposit, i.e. its the section above the coil that radiates the most! I have been using a 15m resonator with a 43 inch whip on a two foot stubby mast, trunk lip mounted on 20 meters with excellent results.

Does anyone know the length of whip needed with the 30 meter resonator to work on 40m?

73, Rick

Should be the other way around...the high current point should radiate more, which is in the case of a quarter wave whip nearest the feed, or below the coil.

-GC

Date: Wed, 29 Jun 1994 18:33:37 GMT
From: lll-winken.llnl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
vixen.cso.uiuc.edu!sdd.hp.com!col.hp.com!news.dtc.hp.com!hplextra!hpcc01!
markb@ames.arpa
Subject: J-Poles and Baluns
To: ham-ant@ucsd.edu

If you are going to use a Balun then why bother with a Jpole. A Jpole is just a 1/2 wave radiator with a 1/4 wave matching section. Just throw away the J part and keep the I part and feed with a 800 ohm or so balun.

Date: 29 Jun 1994 22:09:36 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!news-feed-1.peachnet.edu!news.duke.edu!eff!
news.kei.com!travelers.mail.cornell.edu!newsstand.cit.cornell.edu!
usenet@network.ucsd.edu
Subject: More mobile antenna questions
To: ham-ant@ucsd.edu

In article <hawley.772903032@aries> Chuck Hawley,
hawley@aries.scs.uiuc.edu writes:

>The best thing you can do with a hamstick is to increase the length
>of the base section. Set the hamstick on top of a 3 or 4 foot mast
>mounted off the rear bumper of the van. Anything you do to the whip
>up on the roof is going to couple to the vehicle and appear as
>capacitance across the coil and lower it's Q. Anyway, the plus from
>increasing the whip length is to reduce the coil size, which you
>can't do with a hamstick.

I was wondering about that. I figured that adding a longer section below the whip, but lower and closer to the van wasn't likely to work or tune up as well as the whip on top.

BTW - I'm not necessarily thinking about things to do with/to the hamstick. I'm thinking about things I might homebrew instead of the hamstick. For experimental purposes and the like.

>Read the instruction sheet that came with the hamstick. About a
>1000pf cap across the feedpoint would match the 80. 470pf for the
>40, etc. Or, you can use the matching coil for more flexibility.

Hmmm, maybe I don't have the official hamstick. Mine didn't say anything about the caps. I've got ten-tecs for 20 and up and the 20 meter needs 150 pf I think, but the units I got for 40 and 80 (grey and black respectively) didn't say to use a cap - I don't think...

I have considered to put in a 150 pf variable and a few switched fixed caps to allow me to tune for particular parts of the band. But I'm thinking also of improving the radiator portion.
Guess it comes down to just having to experiment.

Thanks for the responses.

Kevin, WB2EMS

Date: 29 Jun 94 22:14:15 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!cs.utexas.edu!utnut!utcsri!
relay.cs.toronto.edu!smoke.cs.toronto.edu!neat.cs.toronto.edu!cs.toronto.edu!
enenkel@network.ucsd.edu
Subject: Quadfiliar Helix For
To: ham-ant@ucsd.edu

nathan.odle@woodybbs.com (Nathan Odle) writes:

> This might be a dumb question, but why would you want a *fixed* GPS
>station??? Kinda doesn't make sense, huh? Oh well, the answer's
>probably out there somewhere...I just don't see it.

Why, to tell if your mast is flexing in the wind, of course! :-)
Robert Enenkel

Date: Thu, 30 Jun 1994 08:31:33 GMT
From: ihnp4.ucsd.edu!swrinde!pipex!insignia!broken.isltd.insignia.com!
dit@network.ucsd.edu
Subject: Quadfiliar Helix For
To: ham-ant@ucsd.edu

In article <93.1106.7581.0NFB2ABC@woodybbs.com>, nathan.odle@woodybbs.com (Nathan Odle) writes:

|>
|> This might be a dumb question, but why would you want a *fixed* GPS
|>station??? Kinda doesn't make sense, huh? Oh well, the answer's
|>probably out there somewhere...I just don't see it.
|>

I am only guessing, but 'differential GPS' requires a fixed station.

GPS is intentionally corrupted to make it less accurate (and hence less useful to the enemy). The corruption is the same at any given time, however, so if you have a fixed station whose position you know, you can work out what 'error' is being added to the GPS signal. You can then use that to 'correct' the reading you are getting at a remote mobile site. The only requirement is to be in communication with the fixed site.

I know this technique is used quite a bit by survey companies, and is being developed for vehicle navigation systems too...

Date: 29 Jun 1994 20:30:34 GMT
From: pendragon!lfhs2!u2k88@ames.arpa
Subject: Quadfiliar helix for GPS
To: ham-ant@ucsd.edu

In article <1994Jun26.133714.19776@ke4zv.atl.ga.us> gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>
>Most GPS remote antennas are more than just an antenna. They almost
>always include at least a preamp, and in some cases a complete down
>converter assembly. That's because the small flexible coaxes used
>have too great a loss at GPS frequencies to be overcome by just antenna
>gain alone. That's why the antennas are expensive, they actually duplicate
>circuitry in the receiver remotely at the antenna. Constructing such
>circuitry at home is a rather advanced amateur technique. Unless you're
>experienced at microwave construction, it's probably best to pay the
>money for the factory remote antenna.

>
>Gary
>--

Gary, I bought Garmin's GPS antenna. From the outside it looks like a short piece of PVC pipe. plugged at each end.

There are no connections for external power. The only connection is a BNC connector on a piece of RG 59 cable to the GPS itself.

Unless they are impressing a DC current on the cable I don't see a way to get power up to the antenna..

The antenna part is also super light.. I'd be surprised if there was an amp in it.

Steve Lancaster
N5WHW

Date: Wed, 29 Jun 1994 20:07:32
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!europa.eng.gtefsd.com!
sundog.tiac.net!news3.sprintlink.net!news.sprintlink.net!nwnexus!olympus.net!
olympus.net!vaughnwt@network.ucsd.edu
Subject: VHF,UHF metal boom yagi, formula?
To: ham-ant@ucsd.edu

I want to build some yagis for an experiment and I want to construct them with

a metal boom(The entire antenna to be constructed from 1/2" copper tube.) Does anyone have the proper formula handy? TNX in advance.

William Vaughn vaughnwt@olympus.net "Just plain Bill."

Date: Wed, 29 Jun 1994 19:42:43
From: ihnp4.ucsd.edu!swrinde!gatech!newsxfer.itd.umich.edu!zip.eecs.umich.edu!
yeshua.marcam.com!hookup!nic.ott.hookup.net!bushnell.ott.hookup.net!
bushnell@network.ucsd.edu
To: ham-ant@ucsd.edu

References <Cs4AsH.81M@oakhill.sps.mot.com>, <Cs4ECG.9Jr@oakhill.sps.mot.com>, <Cs4nKz.Mxs@osuunx.ucc.okstate.edu>m
Subject : Re: HF Mobile Antennas

In article <Cs4nKz.Mxs@osuunx.ucc.okstate.edu> gcouger@olesun.okstate.edu (Gordon Couger) writes:

>From: gcouger@olesun.okstate.edu (Gordon Couger)
>Subject: Re: HF Mobile Antennas
>Date: Tue, 28 Jun 1994 21:55:46 GMT

>In article <Cs4ECG.9Jr@oakhill.sps.mot.com>,
>George Hawkins <hawk@zinger.sps.mot.com> wrote:
>>Steve,
>>I like my modified Hustlers. take super resonators from band "X+1" and put
>>a radio shack longer stinger in the top. works great!
>>
>>i.e. Use a 10 meter super resonator on 15 meters with the ~39 inch radio
>>shack automobile solid radio antenna replacement that fits in the top of
>>the resonator perfectly!

>To pick a nit. The portion of the antenna above the inductance radiates
>considerably less rf than portion below the inductance. So lengthening the
>lower part of the mast should be more efficient.

>Gordon AB5DG

Gordon Cougar

To pick another nit, an article in April CQ on modified Hustlers says the exact opposite, i.e. its the section above the coil that radiates the most! I have been using a 15m resonator with a 43 inch whip on a two foot stubby mast, trunk lip mounted on 20 meters with excellent results.

Does anyone know the length of whip needed with the 30 meter resonator to work on 40m?

73. Rick

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End of Ham-Ant Digest V94 #205
